### REMARKS

This Amendment is responsive to the Office Action dated February 23, 2009. Applicant has amended claims 42 and 44, and canceled claim 43. Claims 30-35, 42 and 44-52 are now pending.

# Rejections for Obviousness-type Double Patenting:

The Examiner rejected claims 30-35 and 42-52 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent 7,352,685.

The Examiner rejected claims 30-35 and 42-52 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent 7,349,323.

The Examiner rejected claims 42-46 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent 6,890,704.

The Examiner rejected claims 30-34 and 47-51 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 8-14 of U.S. Patent 6,728,196.

Applicant respectfully traverses these rejections. The double patenting rejections are in violation of MPEP 804.01 "Prohibition of Double Patenting Rejections Under 35 USC 121."

The filing of the present application was a direct result of various Restriction Requirements imposed by the USPTO. Therefore, the double patenting rejections are clearly prohibited under MPEP 804.01, and must be withdrawn.

Attached with this response is a copy of an Office Action mailed September 30, 1999 for parent application 09/055,825. In this Office Action, the Patent Office restricted different claims as being directed to the following patentably distinct subject matter: methods, masters, optical disk substrates (i.e., replicas), and stampers. This subject matter restriction imposed by the Patent Office in parent application 09/055,825 clearly indicated that stampers are patentably distinct from methods, masters and optical disk substrates (i.e., replicas).

Also attached with this response is a copy of another Restriction Requirement mailed April 9, 2003 for parent application 09/850,252. In this Office Action, the Patent Office again restricted different claims as being directed to masters, optical disk substrates (i.e., replicas), and stampers.

In view of the subject matter restrictions imposed by the Patent Office in parent application 09/055,825, and again in parent application 09/850,252, the current double patenting rejections are prohibited under MPEP 804.01, and must be withdrawn.

# Claim Rejections of claims 42 and 46 under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 42 and 46 under 35 U.S.C. 102(e) as being anticipated by Sandstrom (US 6,002,663). Applicant maintains traversal of these rejections for the reasons advanced in the previous response. However, in the sole interest of expediting the prosecution of this application, Applicant has amended independent claim 42 to recite the limitations of former claim 43. The current amendment to claim 42 overcomes the rejections of claims 42 and 46 under 35 U.S.C. 102(e).

# Claim Rejections of claims 42, 45 and 46 Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 42, 45 and 46 under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (US 5,325,353) in view of Ohtomo et al. (US 5,763,037). Applicant respectfully traverses these rejections for at least similar reasons to those advanced in previous responses. Namely, Applicant maintains that structural features of claims 42 and 46 are not shown in the prior art. As previously explained, Applicant believes that the "second-generation stamper" requirement of claim 42 is a structural feature of the stamper that distinguishes the stamper of claim 42 from first generation stampers shown in the prior art. In addition, Applicant believes that the track pitch being less than 2 (or less than 1.6) multiplied by a laser spot size associated with a laser used to perform the mastering process is also a structural feature of the stamper that is structurally distinguishable from conventional stampers.

Nevertheless, in the sole interest of expediting the prosecution of this application,
Applicant has amended independent claim 42 to recite the limitations of former claim 43. The
current amendment to claim 42 overcomes the rejections of claims 42, 45 and 46 under 35
U.S.C. 103(a) as being unpatentable over Sasaki et al. in view of Ohtomo.

## Claim Rejections of claims 43-45 Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 43-45 under 35 U.S.C. 103(a) as being unpatentable over Sandstrom (US 6,002,663) in view of Sasaki et al. (US 5,325,353). However, Applicant has already established that Sandstrom fails to qualify as prior art to Applicant's claims under 35 U.S.C. § 103(c).

As explained previously, at the time of the invention, the subject matter of Sandstrom and the subject matter of all pending claims of this application were assigned and/or subject to assignment to Imation Corp. For this reason, Sandstrom is disqualified as prior art under 35 U.S.C. 103(c) for use in obviousness rejections.

The assignments recorded in Sandstrom and in the present application substantiate these assertions. The assignment of Sandstorm to Imation Corp. is recorded in the USPTO at reel/frame 008584/0886. The assignment of the present application to Imation Corp. is recorded in the USPTO at reel/frame 015040/0612. These two recorded assignments demonstrate that the present application and Sandstorm were assigned and/or subject to assignment to Imation Corp. at the time of the invention.

Therefore, the rejections of claims 43-45 under 35 U.S.C. 103(a) as being unpatentable over Sandstrom in view of Sasaki must be withdrawn.

# **CONCLUSION**

In view of the claim amendments and foregoing arguments, all pending rejections based on prior art have been overcome. In addition, Applicant has demonstrated that all pending double-patenting rejections are improper under MPEP 804.01 "Prohibition of Double Patenting Rejections Under 35 USC 121."

Accordingly, all claims in this application are in condition for immediate allowance.

Applicant respectfully requests reconsideration and prompt allowance of all pending claims.

Please charge any additional fees or credit any overpayment to deposit account number 09-0069.

The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

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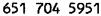
P.O. Box 64898

St. Paul, Minnesota 55164-0898 Telephone: (651) 704-3604 Facsimile: (651) 704-5951 By:

Name: Eric D. Levinsor

Reg. No.: 35,814

**IMATIONLEGALAFFAIRS** 





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# UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Commissioner of Petents and Trademarks

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Applicant(s)

	09/055,825		Edwards				
Office Action Summary	Examinar Martin J. Angebr	anndt	Group Art Unit 1756				
⊠ Responsive to communication(s) filled on Nov 3, 1998							
☐ This action is FINAL.							
Since this application is in condition for allowance exce in accordance with the practice under Ex parte Quayle,	1935 C.D. 11; 453 C	J.G. 213.		,			
A shortened statutory period for response to this action is is longer, from the mailing date of this communication. Fa application to become abandoned. (35 U.S.C. § 133). Ex 37 CFR 1.136(a).	illure to respond withi	n the perio	a tor response v	viii çause the			
Disposition of Claims							
X Claim(s) <u>1-55</u>		is/are	pending in the a	application.			
Of the above, claim(s) 27-55		is/are w	ithdrawn from	consideration.			
Cleim(s)	i	s/are allowed.					
	i	s/are rejected.					
Claim(s)				o.			
The drawing(s) filed on	is be ner.  riority under 35 U.S.C ples of the priority do lal Number)  om the International Bi	proved C. § 119(a)- cuments ha	eve been  Rule 17.2(a)).	·			
Attachment(s)  Notice of References Cited, PTO-892  Information Disclosure Statement(s), PTO-1449, P Interview Summary, PTO-413  Notice of Draftsperson's Patent Drawing Review, I Notice of Informal Patent Application, PTO-152	·						
SEE OFFICE ACTIO	N ON THE FOLLOWING	G PAGES					

Application No.

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The disclosure is objected to because of the following informalities: the application referred to on page 19 should include the US application number in its reference to that application.

Appropriate correction is required.

- 2 Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-26, drawn to a method of making an optical disk stamping master using exposure and development of a substrate coated with a photosensitive resin, classified in class 430, subclass 320.
  - II. Claims 27-37, drawn to a stamping master including an patterned photosensitive layer, classified in class 430, subclass 9.
  - III. Claims 38-45, drawn to a optical disk substrate, classified in class 428, subclass 64.2.
  - IV. Claims 46-55, drawn to a stamper substrate where the pattern is formed in the substrate material, classified in class 425, subclass 396.
- The inventions are distinct, each from the other because of the following reasons:

Inventions group I and group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product may be made using a molding process where the exposure of the

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photosensitive layer is not followed by a development step, but fully cured while in contact with a transparent embossing master.

- Inventions group I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the disk may be made by either directly mastering the substrate or a stamper used to make the impression in the disk substrate, using laser ablation to form the pattern.
- Inventions group I and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the stamper may be made using laser ablation to form the pattern directly in the substrate.
- Inventions group II and group III are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product may be

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made using a stamper made in a different manner, such as direct laser ablation, or the disk may be made by directly ablating the surface to form the desired pattern.

- Inventions group II and group IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful in forming a resin based stamper, rather than a metal stamper which has the pattern etched in it and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.
- Inventions group IV and group III are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product may be

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made using a stamper made in a different manner, such as direct laser ablation, or the disk may be made by directly ablating the surface to form the desired pattern.

- Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter, restriction for examination purposes as indicated is proper.
- During a telephone conversation with Eric Levinson on September 2, 1999 a provisional election was made with traverse to prosecute the invention of group I, claims 1-26. Affirmation of this election must be made by applicant in replying to this Office action. Claims 27-55 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.
- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10,14-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Roach et al. '337.

Roach et al. teaches the formation of a stamping master using the process, where a spiral groove is formed down to the bottom of the substrate and is electroformed to form a first and second and third metal master which is then used top emboss information into a plastic substrate.

(3/20-4/18)

Claims 1-20 and 22-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DeLaat '735.

DeLaat '735 teaches the formation of a spiral pattern, where the depth of the grooves is 100 nm. (0.1 microns) This is hardened through UV exposure, silver is deposited on it, nickel electroformed thereon, the master is peeled away and a second master is formed which is identical to the pattern in the master.

15 Claims 1-16 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Yoshizawa et al. '563.

Figures 1a-g teach the exposure of the resist, such that the resist remaining on the glass substrate surface is smaller than the openings, the electroforming of this to form a stamper which is then used to shape a polycarbonate substrate. (see column 1)

16 Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLaat '735, in view of Yoshizawa et al. '563.

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It would have been obvious to one skilled in the art to modify the process of DeLaat '735 to make other optical recording media substrate which are known to be useful in the art, such as those which have wider openings than resist covered areas taught by Yoshizawa et al. '563, with a reasonable expectation of forming a useful recording medium substrate and being able to form more of them due to the number of stamping masters which can be made from the first generation master and used to emboss substrates.

The prior art made of record and not relied upon is considered pertinent to applicant's 17 disclosure.

DeGraaf et al. '607 teaches the use of the cured master to form optical disc substrates.

Higuchi et al. DE 4140712 teaches forming masters where the open spaces are larger than the resist covered areas.

Ichihara et al. '756 teaches optical recording media of interest.

Leonard et al. '804 and Santoh et al. '469 teach making stampers for optical articles and using them.

Keizer "VideoDisc Mastering" RCA Review Vol. 39(1) (3/1978) pp 60-86.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Angebranndt whose telephone number is (703) 308-4397.

I am normally available between 7:30 AM and 5:00 PM, Monday through Thursday and 7:30 AM and 4:00 PM on alternate Fridays.

If repeated attempts to reach me are unsuccessful, my supervisor may be reached at (703) 308-4552.

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Facsimile correspondence should be directed to (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Martin J. Angebranndt

Primery Examiner, Group 1750

September 23, 1999

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	10	Application No.	Applicant(s)				
٠,		09/850,252	EDWARDS, JATHAN D.				
Office Action Sum	mary	Examiner	Art Unit				
:		Paul Huber	2653				
The MAILING DATE of this Period for Reply	s communication app	ears on the cover sheet with the	correspondence address -				
A SHORTENED STATUTORY R THE MAILING DATE OF THIS C - Extensions of time may be available under after SIX (8) MONTHS from the mailing dat - If the period for reply specified above is less - If NO period for reply is specified above, the failure to reply within the set or extended y Any reply received by the Office later than the samed patent term adjustment. See 37 CF Status	COMMUNICATION, the provisions of 37 CFR 1.1: e of this communication. a than thirly (30) days, a reph a maximum statutory period varied for reply will, by statuta hree months after the mailing	38(e). In no event, however, may a reply be y within the electrory minimum of thirty (30) of will apply and will expire SIX (6) MONTHS for became ABANDO!	timely filed  ays will be considered timely.  arm the mailing date of this communication.				
1) Responsive to communic	ation(s) filed on	······································					
2a) ☐ This action is FINAL.	2b)⊠ Th	is action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims							
4)⊠ Claim(s) <u>1-29</u> is/are pend	ing in the application	) <b>.</b>					
4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6) Claim(s) Is/are rejected.							
7) Claim(s) is/are objected to.							
8 X Claim(s) 1-29 are subject to restriction and/or election requirement.   Application Papers							
	d to by the Examina	r					
9) The specification is objected to by the Examiner.  10) The drawing(s) filed on Is/are: a) accepted or b) objected to by the Examiner.							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
11) The proposed drawing correction filed on is: a) approved b) disapproved by the Examiner.							
If approved, corrected drawings are required in reply to this Office action.							
12) The oath or declaration is objected to by the Examiner.							
Priority under 35 U.S.C. §§ 119 an	d 120						
13)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).							
a) ⊠ All b) □ Some * c) □ None of:							
1. Certified copies of the priority documents have been received.							
2. Certified copies of the priority documents have been received in Application No. 09/730.246							
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.							
14) Acknowledgment is made of		•					
	foreign language pro	visional application has been r	ecelved.				
achment(s)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawl 3) Information Disclosure Statement(s) (I	ng Review (PTQ-948)	5) Notice of Inform	ary (PTO-413) Paper No(s) al Patent Application (PTO-152)				
U.S. Patent and Trademark Office PTO-328 (Rev. 04-01)	Office Ar	ction Summary	Part of Paper No. 4				

Application/Control Number: 09/850,252

Art Unit 2653

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#### **DETAILED ACTION**

#### Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Claims 1-11, drawn to a master disc containing an imaged photoresist pattern, classified in class 430, subclass 321.
- II. Claims 12-19, drawn to an optical disk substrate, classified in class 369, subclass 275.4,
- III. Claims 20-29, drawn to a stamper for optical disks, classified in class 101, subclass 28.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not used together as the master disc is used to form the stamper and the stamper is used to emboss the pattern into the disk substrate.

Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a optical recording medium itself or may be used to form a stamper using patterned layer(s) having the relief pattern formed on a substrate and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions III and II are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product may be made by a stamper, which has the relief pattern formed in a layer(s) on the substrate rather than etched into the substrate.

Application/Control Number: 09/850,252

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

A telephone call was not made to the applicant's representative to request an oral election to the above restriction requirement due to the nature of the application and the need for the examiner to promptly act on the application.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquity concerning this communication or earlier communications from the examiner should be directed to Paul Huber whose telephone number is 703-308-1549. The examiner can normally be reached on Flexi-Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 703-305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-9051 for regular communications and 703-308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

703-3

Paul Huber Primary Examiner Art Unit 2653

pwh April 7, 2003